CDR File Information

Vehicle Identification Number	2CNDL23F756002651
Investigator	
Case Number	
Investigation Date	
Crash Date	
Filename	NHTSA4985-2CNDL23F756002651.CDR
Saved on	Wednesday, July 28 2004 at 03:08:57 PM
Data check information	7CB06F85
Collected with CDR version	Crash Data Retrieval Tool 2.40
Collecting program verification number	32B7A917
Reported with CDR version	Crash Data Retrieval Tool 2.70
Reporting program verification number	70812808
Interface used to collected data	Block number: 00 Interface version: 3D Date: 06-18-04 Checksum: 5C00
Event(s) recovered	Deployment Non-Deployment

SDM Data Limitations

SDM Recorded Crash Events:
There are two types of SDM recorded crash events. The first is the Non-Deployment Event. A Non-Deployment Event is an event severe enough to "wake up" the sensing algorithm but not severe enough to deploy the air bag(s). It contains Pre-Crash and Crash data. The SDM can store up to one Non-Deployment Event. This event can be overwritten by an event that has a greater SDM recorded forward velocity change. This event will be cleared by the SDM after the ignition has been cycled 250 times.
The second type of SDM recorded crash event is the Deployment Event. It also contains Pre-Crash and Crash data. The SDM can store up to two different Deployment Events, if they occur within five seconds of one another. Deployment events cannot be overwritten or cleared from the SDM. Once the SDM has deployed the air bag, the SDM must be replaced.
The data in the non-deployment file will be locked after a deployment, if the non-deployment occurred within 5 seconds before the deployment or a deployment level event occurs within 5 seconds after the deployment.

SDM Data Limitations:
-SDM Recorded Vehicle Forward Velocity Change reflects the change in forward velocity that the sensing system experienced during the recorded portion of the event. SDM Recorded Vehicle Forward Velocity Change is the change in velocity during the recording time and is not the speed the vehicle was traveling before the event, and is also not the Barrier Equivalent Velocity. This data should be examined in conjunction with other available physical evidence from the vehicle and scene when assessing occupant or vehicle forward velocity change. For deployments and deployment level events, the SDM will record 100 milliseconds of data after deployment criteria is met and up to 50 milliseconds before deployment criteria is met. For non-deployments, the SDM will record the first 150 milliseconds of data after algorithm enable.
-Event Recording Complete will indicate if data from the recorded event has been fully written to the SDM memory or if it has been interrupted and not fully written.
-SDM Recorded Vehicle Speed accuracy can be affected if the vehicle has had the tire size or the final drive axle ratio changed from the factory build specifications.
-Brake Switch Circuit Status indicates the status of the brake switch circuit.
-Pre-Crash Electronic Data Validity Check Status indicates "Data Invalid" if the SDM does not receive a valid message.
-Driver's Belt Switch Circuit Status indicates the status of the driver's seat belt switch circuit.
-The Time between Non-Deployment and Deployment Events is displayed in seconds. If the time between the two events is greater than five seconds, "N/A" is displayed in place of the time.
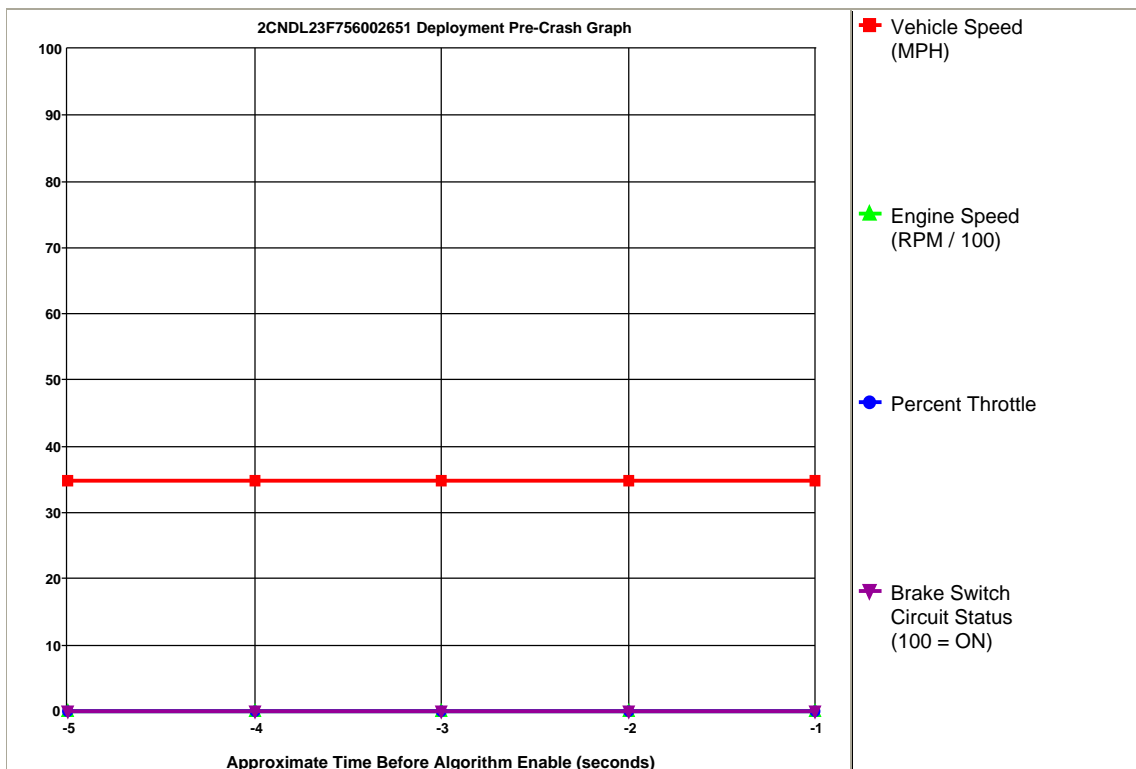-If power to the SDM is lost during a crash event, all or part of the crash record may not be recorded.

SDM Data Source:
All SDM recorded data is measured, calculated, and stored internally, except for the following:
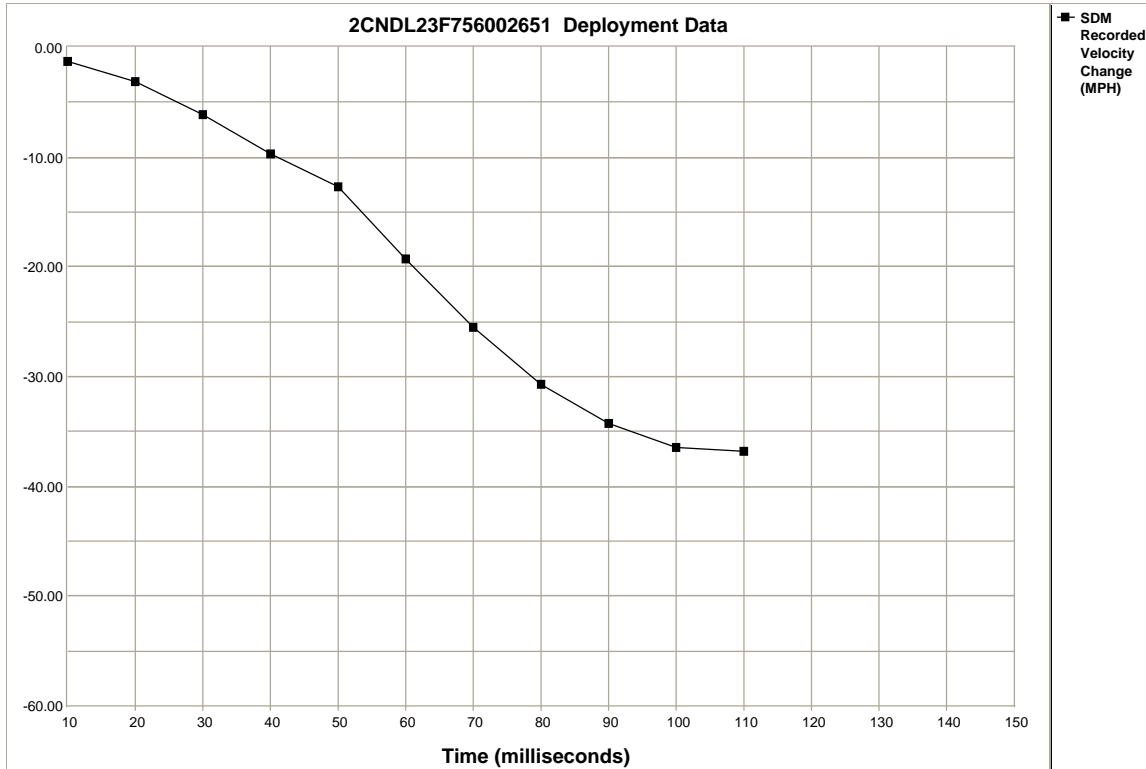-Vehicle Speed, Engine Speed, and Percent Throttle data are transmitted once a second by the Powertrain Control Module (PCM), via the Class 2 data link, to the SDM.
-Brake Switch Circuit Status data is transmitted once a second by either the ABS module or the PCM, via the Class 2 data link, to the SDM. Depending on vehicle option content, the Brake Switch Circuit Status data may not be available.
-In most vehicles, the Driver's Belt Switch Circuit is wired directly to the SDM. In some vehicles, the Driver's Belt Switch Circuit Status data is transmitted from the Body Control Module (BCM), via the Class 2 data link, to the SDM.

System Status At Deployment

SIR Warning Lamp Status	OFF
Driver's Belt Switch Circuit Status	BUCKLED
Ignition Cycles At Deployment	49
Ignition Cycles At Investigation	50
Maximum SDM Algorithm Forward Velocity Change (MPH)	-37.04
Algorithm Enable to Maximum SDM Recorded Velocity Change (msec)	107.5
Driver First Stage Time Algorithm Enabled to Deployment Command Criteria Met (msec)	10
Driver Second Stage Time Algorithm Enabled to Deployment Command Criteria Met (msec)	12.5
Passenger First Stage Time Algorithm Enabled to Deployment Command Criteria Met (msec)	10
Passenger Second Stage Time Algorithm Enabled to Deployment Command Criteria Met (msec)	12.5
Time Between Non-Deployment And Deployment Events (sec)	N/A
Event Recording Complete	Yes

2CNDL23F756002651 Deployment Pre-Crash Graph

Approximate Time Before Algorithm Enable (seconds)

- Vehicle Speed (MPH)
- Engine Speed (RPM / 100)
- Percent Throttle
- Brake Switch Circuit Status (100 = ON)

Seconds Before AE	Vehicle Speed (MPH)	Engine Speed (RPM)	Percent Throttle	Brake Switch Circuit Status
-5	35	0	0	OFF
-4	35	0	0	OFF
-3	35	0	0	OFF
-2	35	0	0	OFF
-1	35	0	0	OFF

2CNDL23F756002651 Deployment Data

Time (milliseconds)	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
SDM Recorded Velocity Change	-1.32	-3.07	-6.14	-9.65	-12.73	-19.31	-25.45	-30.72	-34.23	-36.42	-36.86	N/A	N/A	N/A	N/A

System Status At Non-Deployment

SIR Warning Lamp Status	OFF
Driver's Belt Switch Circuit Status	UNBUCKLED
Ignition Cycles At Non-Deployment	41
Ignition Cycles At Investigation	50
Maximum SDM Algorithm Forward Velocity Change (MPH)	-0.70
Algorithm Enable to Maximum SDM Recorded Velocity Change (msec)	37.5
A Deployment was Commanded Prior to this Event	No
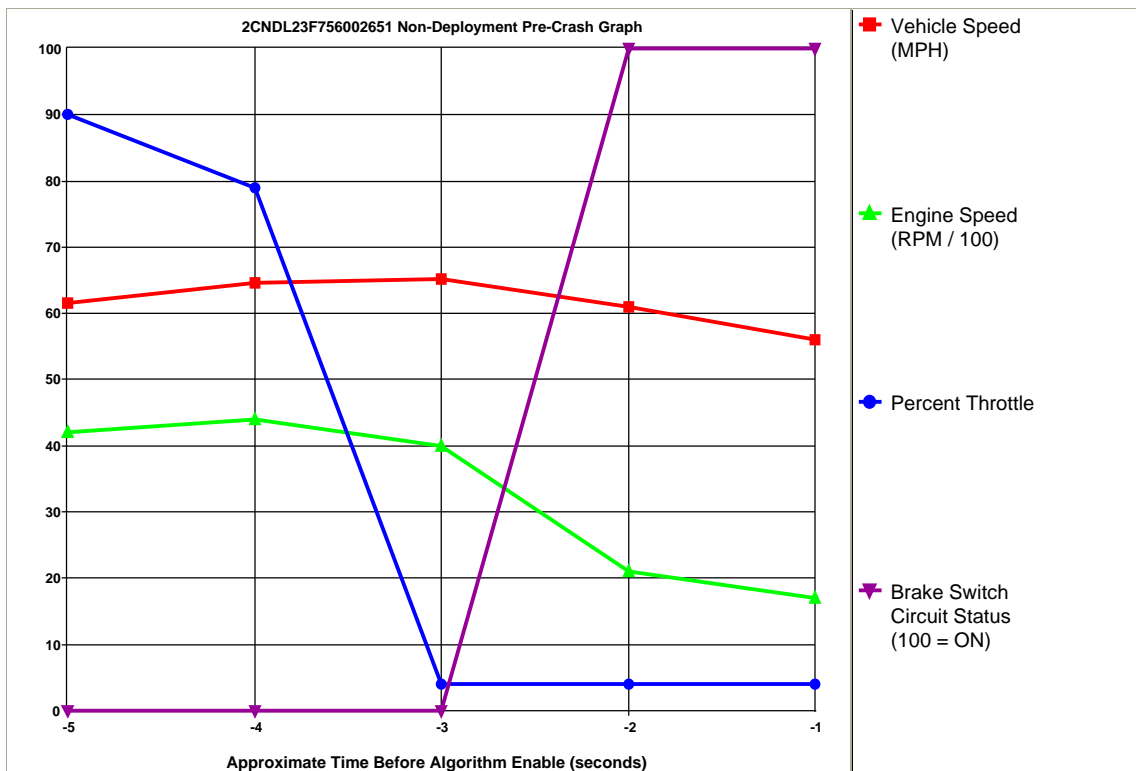
2CNDL23F756002651 Non-Deployment Pre-Crash Graph

Approximate Time Before Algorithm Enable (seconds)

- Vehicle Speed (MPH)
- Engine Speed (RPM / 100)
- Percent Throttle
- Brake Switch Circuit Status (100 = ON)

Seconds Before AE	Vehicle Speed (MPH)	Engine Speed (RPM)	Percent Throttle	Brake Switch Circuit Status
-5	62	4160	90	OFF
-4	65	4352	79	OFF
-3	65	3968	4	OFF
-2	61	2112	4	ON
-1	56	1728	4	ON
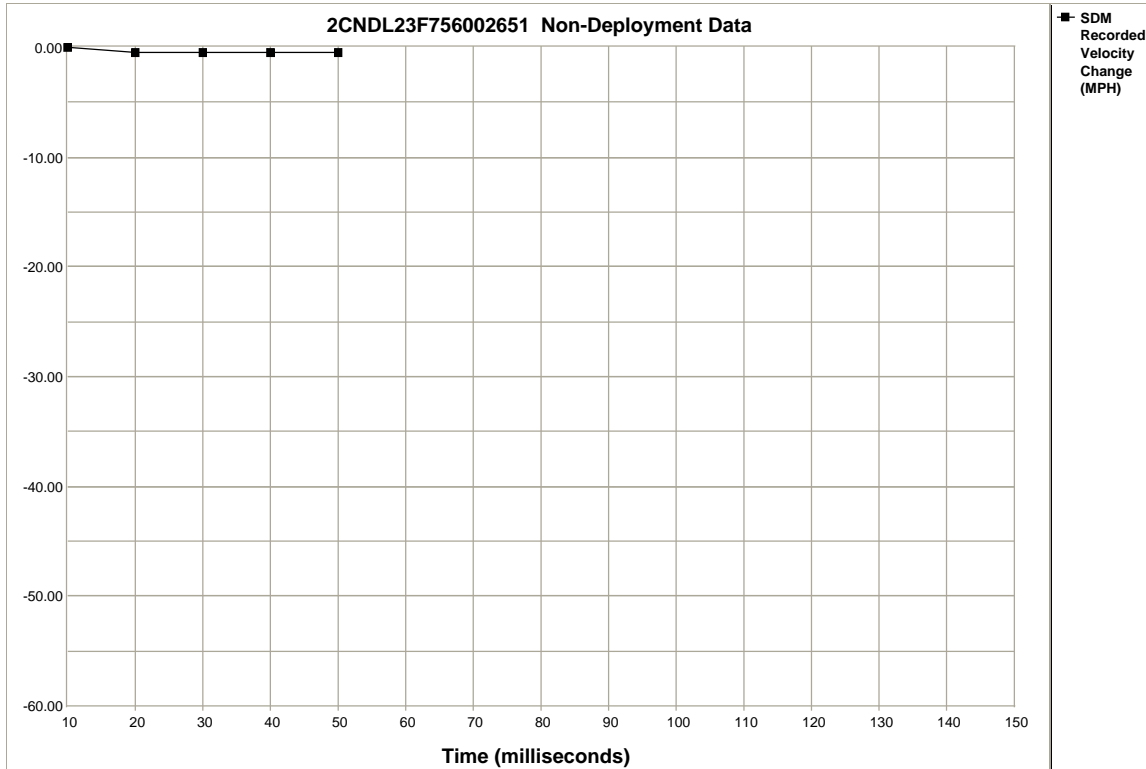
2CNDL23F756002651 Non-Deployment Data

Time (milliseconds)	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
SDM Recorded Velocity Change	0.00	-0.44	-0.44	-0.44	-0.44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Hexadecimal Data

This page displays all the data retrieved from the air bag module.
It contains data that is not converted by this program.

```
$01   A0 2C 00 00 00 00
$02   AC 91 00 00 00 00
$03   41 53 34 30 35 31
$04   4B 47 35 54 39 32
$05   02 41 32 00 00 00
$06   22 73 33 28 00 00
$10   FF F9 FC 00 00 00
$11   A9 00 9C 00 00 84
$12   00 00 00 00 00 00
$13   03 00 00 00 00 00
$14   F3 04 ED 80 51 00
$18   84 84 85 41 FF 00
$1C   FA FA FA FA FA FA
$1D   FA FA FA FA FA FA
$1E   FA FA 00 00 00 00
$1F   FF 02 00 00 00 00
$20   00 00 00 04 F0 00
$21   FF FF FF FF FF FF
$22   FF FF FF FF 00 00
$23   00 01 01 01 01 FF
$24   FF FF FF FF FF FF
$25   FF FF FF 05 00 00
$26   5A 62 69 68 63 C0
$27   0A 0A 0A CA E5 00
$28   1B 21 3E 44 41 00
$29   FF FA FE DB 00 00
$2A   00 00 00 00 00 00
$2B   00 00 00 00 00 00
$2C   00 00 FF 00 00 33
$2D   00 00 00 00 00 00
$2E   00 00 00 00 00 00
$30   40 00 00 05 F0 00
$31   FF FF FF FF FF FF
$32   FF FF FF FF 00 00
$33   09 09 0B 0B 03 03
$34   05 05 03 07 0E 16
$35   1D 2C 3A 46 4E 53
$36   54 FF FF FF FF 0B
$37   38 38 38 38 38 00
$38   00 00 00 00 00 00
$39   00 00 00 00 00 00
$3A   FF F9 FE 00 D3 00
$3B   00 00 22 22 00 00
$3C   4D 0A 90 00 00 AA
$3D   03 03 03 03 00 00
$3E   00 00 00 00 00 00
$40   FF FF FF FF FF 00
$41   FF FF FF FF FF FF
$42   FF FF FF FF 00 00
$43   FF FF FF 00 00 00
$44   FF 00 00 00 00 00
$50   00 00 00 00 0C 06
$51   0F AA 00 00 00 00
$60   04 04 05 05 52 29
$61   2B 00 00 00 00 00
```